

REMARKS

Prior to entry of the amendments contained herein, Claims 1-34 are pending in the application. It is gratefully acknowledged that despite the previous Election of Species, the Examiner has opted to examine all of the currently pending claims. It is also gratefully acknowledged that Claims 4-8, 14-17, 23, 24, 30 and 31 have been either rejected under §112, second paragraph, or objected to, but would be allowable if rewritten to overcome the rejections or objections. The Examiner has objected to Claims 4-19 and 23-33 because of informalities. The Examiner rejected Claims 25, 26, 32 and 33 under 35 U.S.C. §112, first paragraph, for failing to comply with the enablement requirement. The Examiner rejected Claims 1-8, 11-22 and 27-29 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner has rejected Claim 34 under 35 U.S.C. §102(e) as being anticipated by Kuchi et al. (U.S. Patent 6,542,556). The Examiner has rejected Claims 9, 10, 18 and 19 under 35 U.S.C. §103(a) as being unpatentable over Kuchi et al. in view of Whinnett et al. (U.S. Patent 6,317,411). The Examiner has rejected Claims 1, 3, 11, 13, 20, 21, 27 and 28 under the judicially created doctrine of double patenting over Kim et al. (U.S. Patent 6,690,712).

Please add new Claims 35 and 36. New Claims 35 and 36 are drawn to Fig. 12. No new matter has been added.

Please cancel Claims 25, 26, 32 and 33, without prejudice.

It is initially noted that the Examiner has not provided any examination for Claims 2, 12, 22 and 29. Proper examination of claims 2, 12, 22 and 29 is respectfully requested. It is also respectfully submitted that Applicants require a definite status of these claims prior to being able to determine the necessity of a Terminal Disclaimer.

The Examiner has rejected Claims 1, 3, 11, 13, 20, 21, 27 and 28 under the judicially created doctrine of double patenting over Kim et al. (U.S. Patent 6,690,712). Applicants

respectfully reserve the right to address these rejections until all of the as yet unresolved issues regarding the other claims are in fact resolved, and in particular, after a proper examination of Claims 2, 12, 22 and 29 has been provided, as the resolution will effect the Applicants' decision as to the filing of a terminal disclaimer.

The Examiner has objected to Claims 4-19 and 23-33 because of informalities. As suggested by the Examiner, Claims 4, 9, 11, 14 and 18 have been amended to recite, "UTRAN (UMTS (Universal Mobile Telecommunication System) Terrestrial Radio Access Network)". As further suggested by the Examiner, Claims 23, 25, 27, 30 and 32 have been amended to recite "A UE (User Equipment)". Based on at least the foregoing amendments, withdrawal of the objections to Claims 4-19 and 23-33 is respectfully requested.

The Examiner rejected Claims 25, 26, 32 and 33 under 35 U.S.C. §112, first paragraph, for failing to comply with the enablement requirement. Claims 25, 26, 32 and 33 have been cancelled herein, and thus the rejection has been rendered moot.

The Examiner rejected Claims 1-8, 11-22 and 27-29 under 35 U.S.C. §112, second paragraph, as being indefinite. Regarding Claim 1, the Examiner alleges, "'after transmission power control' does not clearly indicate after what 'transmission power control'." It is well known in the art that UTRAN transmitters perform a transmission power control procedure prior to transmitting a signal; therefore, the "after transmission power control" refers to a time after the transmission power control procedure has taken place. Based on at least the foregoing, withdrawal of the rejections of Claims 1-8, 11-22 and 27-29 is respectfully requested.

The Examiner stated that Claims 3, 4, 8, 11-14, 18, 20, 22 and 27-29 contain §112 issues giving rise to their rejections. Each of these claims has been amended as set forth herein to address the various rejections. Based on at least the foregoing amendments, withdrawal of the objections to Claims 3, 4, 8, 11-14, 18, 20, 22 and 27-29 is respectfully requested.

Regarding the rejection of Claim 34 under §102(e), the Examiner states that Kuchi et al. anticipates every element of the claim. Kuchi et al. discloses a space-time code for multiple antenna transmission. It is respectfully submitted that a less than clear understanding of Claim 34 has resulted in the current rejection. For clarification purposes only, Claim 34 has been amended to read, “means for transmitting pilot signals from the at least four antennas such that at least two same pilot signals are transmitted from at least two antennas.” It is respectfully submitted that Claim 34 is not anticipated by Kuchi et al. Based on at least the foregoing, withdrawal of the rejection of Claim 34 is respectfully requested.

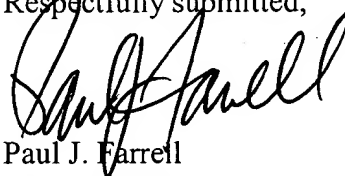
The Examiner has rejected Claims 9, 10, 18 and 19 under 35 U.S.C. §103(a) as being unpatentable over Kuchi et al. in view of Whinnett et al. (U.S. Patent 6,317,411). Kuchi et al. discloses a space-time code for multiple antenna transmission; Whinnett et al. discloses a method and system for transmitting and receiving signals transmitted from an antenna array with transmit diversity techniques. Claims 9 and 18 describe a transmitter and transmission method having at least four transmission antennas. The transmitter and method produce two pair of signals, each pair of signals being identical to the other signal in the pair. The four signals are then transmittable through four antennas, resulting in two antennas transmitting two identical signals and the other two antennas transmitting another two identical signals. In brief, Claims 9 and 18 recite four (4) antennas that transmit signals derived from two (2) symbol patterns and one (1) orthogonal code. Each of Kuchi et al. and Whinnett et al. transmit a different signal from each antenna. Kuchi et al. is silent as to its spreading process; Whinnett et al. spreads four (4) signals and uses two (2) orthogonal codes. Claims 9, 10, 18 and 19 of the present application recite two signals (which use two symbol patterns, i.e., a first symbol pattern and a second symbol pattern, and the two symbol patterns are orthogonal). The symbol patterns of the present invention are different, thereby the first and second symbol patterns are transmitted through two different antennas. Further, Whinnett et al. uses two orthogonal codes, whereas the claims of the present application recite one orthogonal code. Moreover, Kuchi et al. discloses an offset block (104), which implies a transmission of signals through two antennas having different transmission time points is delayed; wherein the claims of the present application recite that signals are transmitted

at the same transmission time point. Based on at least the foregoing, withdrawal of the rejections of Claims 9, 10, 18 and 19 is respectfully requested.

Independent Claims 1, 4, 9, 11, 14, 18, 20, 23, 27, 30, 34, 35 and 36 are believed to be in condition for allowance. Without conceding the patentability per se of dependent Claims 2, 3, 5-8, 10, 12, 13, 15-17, 19, 21, 22, 24, 28, 29, and 31, these are likewise believed to be allowable by virtue of their dependence on their respective amended independent claims. Accordingly, reconsideration and withdrawal of the rejections of dependent Claims 2, 3, 5-8, 10, 12, 13, 15-17, 19, 21, 22, 24, 28, 29, and 31 is respectfully requested.

Accordingly, all of the claims pending in the Application, namely, Claims 1-24, 27-31, 34-36 are believed to be in condition for allowance. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul J. Farrell", is written over the typed name.

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